Author Index

Volume 31

Allan D.W. Technical Directives for Standardization of GPS Time Receiver Software, D.W. Allan, C. Thomas, 69-79.

Allisy A. From the curie to the becquerel, 467-479.

Ancsin J. The Effects of Annealing on the Resistance of High-temperature PRTs at the Triple Point of Water after High-temperature Use, J. Ancsin, Y. Zhang, 85-91.

Armstrong T.R. A Method to Measure Newton's Gravitational Constant, M.P. Fitzgerald, T.R. Armstrong, R.B. Hurst, A.C. Corney, 301-310.

Athané B. Législation et Unités de Mesure, 511-513.

Balmisa J.M. Josephson Voltage Standard International Comparison, M. López, A. Camón, J.M. Balmisa, M. Coterón, P. de la Court, L. Erard, J.-P. Lo-Hive, G. Genevès, L. Grimm, L. Lorenzo, R. Pöpel, C. Rillo, 395-397.

Bartscher M. X-ray and Neutron Interferometry and the Measurement of Fundamental Constants, U. Bonse, H. Uebbing, M. Bartscher, M. Nußhardt, 195-201.

Becker P. The Role of NA in the SI: An Atomic Path to the Kilogram, P. Seyfried, P. Becker, 167-172.

——. The Lattice Parameter of Silicon: A Survey, P. Becker, G. Mana, 203-209.

Biernacki S.W. The Influence of Temperature, Isotope Composition and Impurities on the Lattice Parameter of Si, 251-254

Birch K.P. Correction to the Updated Edlén Equation for the Refractive Index of Air, K.P. Birch, M.J. Downs, 315-316.

Bonse U. X-ray and Neutron Interferometry and the Measurement of Fundamental Constants, U. Bonse, H. Uebbing, M. Bartscher, M. Nußhardt, 195-201.

Brand U. International Comparison of Two Iodine-stabilized He-Ne Lasers at $\lambda = 543$ nm, H.R. Simonsen, U. Brand, F. Riehle, 341-347.

Camón A. Josephson Voltage Standard International Comparison, M. López, A. Camón, J.M. Balmisa, M. Coterón, P. de la Court, L. Erard, J.-P. Lo-Hive, G. Genevès, L. Grimm, L. Lorenzo, R. Pöpel, C. Rillo, 395-397.

Canavero F. A Comparison of Fractal Dimension and Spectrum Coefficient Characterization of $1/f^{\alpha}$ Noise, D. Labate, F. Canavero, A. De Marchi, 51-53.

Castle J.E. Stability of Reference Masses II: The Effect of Environment and Cleaning Methods on the Surfaces of Stainless Steel and Allied Materials, M.P. Seah, J.H. Qiu, P.J. Cumpson, J.E. Castle, 93-108.

Cerruti L. The Mole, Amedeo Avogadro and Others, 159-166.

Chekhovsky A.M. Refinement of the Metrological Chain for Calibration of Long-distance Measurement Systems, A.N. Golubev, A.M. Chekhovsky, S.N. Zakroischikov, 137-139.

Corney A.C. A Method to Measure Newton's Gravitational Constant, M.P. Fitzgerald, T.R. Armstrong, R.B. Hurst, A.C. Corney, 301-310.

Coterón M. Josephson Voltage Standard International Comparison, M. López, A. Camón, J.M. Balmisa, M. Coterón, P. de la Court, L. Erard, J.-P. Lo-Hive, G. Genevès, L. Grimm, L. Lorenzo, R. Pöpel, C. Rillo, 395-397.

Crovini L. ITS-90 Realization in Fourteen National Standards Laboratories: Results of a CCT Inquiry, L. Crovini, P.P.M. Steur, 109-115.

——. The ITS-90 Temperature of the Gallium Melting Point and the Mercury Freezing Point, 399-400.

Cumpson P.J. Stability of Reference Masses I: Evidence for Possible Variations in the Mass of Reference Kilograms Arising from Mercury Contamination, P.J. Cumpson, M.P. Seah, 21-26.

——. Stability of Reference Masses II: The Effect of Environment and Cleaning Methods on the Surfaces of Stainless Steel and Allied Materials, M.P. Seah, J.H. Qiu, P.J. Cumpson, J.E. Castle, 93-108.

——. Stability of Reference Masses III: Mechanism and Long-term Effects of Mercury Contamination on Platinum-Iridium Mass Standards, P.J. Cumpson, M.P. Seah, 375-388.

Daywitt W.C. Attenuation in a Plated Coaxial Transmission Line, 349-355.

De Bièvre P. Molar Mass Determination for N_A (Avogadro) Projects: Present Status and Potential for the Future, P. De Bièvre, S. Valkiers, 245-249.

de Boer J. On the History of Quantity Calculus and the International System, 405-429.

de la Court P. Comparisons of the Josephson Voltage Standard of the BIPM with those of the OFM and the NMi, D. Reymann, U. Feller, P. de la Court, T.J. Witt, 45-48.

——. Josephson Voltage Standard International Comparison, M. López, A. Camón, J.M. Balmisa, M. Coterón, P. de la Court, L. Erard, J.-P. Lo-Hive, G. Genevès, L. Grimm, L. Lorenzo, R. Pöpel, C. Rillo, 395-397.

De Marchi A. A Comparison of Fractal Dimension and Spectrum Coefficient Characterization of $1/f^{\alpha}$ Noise, D. Labate, F. Canavero, A. De Marchi, 51-53.

Delahaye F. Accurate AC Measurements of the Quantized Hall Resistance from 1 Hz to 1,6 kHz, 367-373.

Deslattes R.D. Early History and Future Outlook for the X-ray Crystal Density Method, 173-179.

Downs M.J. Correction to the Updated Edl^{n} Equation for the Refractive Index of Air, K.P. Birch, M.J. Downs, 315-316.

Durieux M. Revised Values for $(t_{90} - t_{68})$ from 630 °C to 1064 °C, R.L. Rusby, R.P. Hudson, M. Durieux, 149-153.

Edler F. Correlation Between the Resistance Ratios of Platinum Resistance Thermometers at the Melting Point of Gallium and the Triple Point of Mercury, Y.P. Singh, H. Maas, F. Edler, Z.H. Zaidi, 49-50.

Erard L. Josephson Voltage Standard International Comparison, M. López, A. Camón, J.M. Balmisa, M. Coterón, P. de la Court, L. Erard, J.-P. Lo-Hive, G. Genevès, L. Grimm, L. Lorenzo, R. Pöpel, C. Rillo, 395-397.

Feller U. Comparisons of the Josephson Voltage Standard of the BIPM with those of the OFM and the NMi, D. Reymann, U. Feller, P. de la Court, T.J. Witt, 45-48.

Fitzgerald M.P. A Method to Measure Newton's Gravitational Constant, M.P. Fitzgerald, T.R. Armstrong, R.B. Hurst, A.C. Corney, 301-310.

Frantsuz E.T. Measuring the Vertical Displacements of the Centre of Gravity of a Levitated Superconducting Body, V.M. Khavinson, E.T. Frantsuz, 1-7.

Gam K.S. Immersion Characteristics and Reproducibility of the Gold/Palladium Thermocouple, Y.-G. Kim, K.S. Gam, K.H. Kang, 145-147.

Gardner J.L. Reply to Comment by E. Wolf on "Radiometric Measurements and Correlation-induced Spectral Changes" by K.A. Nugent and J.L. Gardner, 313-314.

Genevès G. A Comparison of One Volt Josephson Junction Array Voltage Standards Driven by a Common Microwave Source, D. Reymann, J.-P. Lo-Hive, G. Genevès, 35-37.

——. Josephson Voltage Standard International Comparison, M. López, A. Camón, J.M. Balmisa, M. Coterón, P. de la Court, L. Erard, J.-P. Lo-Hive, G. Genevès, L. Grimm, L. Lorenzo, R. Pöpel, C. Rillo, 395-397.

Giardini W.J. Fabrication and Sphericity Measurements of Single-crystal Silicon Spheres, A.J. Leistner, W.J. Giardini, 231-243.

Girard G. The Third Periodic Verification of National Prototypes of the Kilogram (1988-1992), 317-336.

Godisov O.N. Scientific, Engineering and Metrological Problems in Producing Pure ^{28}Si and Growing Single Crystals, Yu.V. Tarbeyev, A.K. Kaliteyevsky, V.I. Sergeyev, R.D. Smirnov, O.N. Godisov, 269-273.

Golubev A.N. Refinement of the Metrological Chain for Calibration of Long-distance Measurement Systems, A.N. Golubev, A.M. Chekhovsky, S.N. Zakroischikov, 137-139.

Grimm L. Josephson Voltage Standard International Comparison, M. López, A. Camón, J.M. Balmisa, M. Coterón, P. de la Court, L. Erard, J.-P. Lo-Hive, G. Genevès, L. Grimm, L. Lorenzo, R. Pöpel, C. Rillo, 395-397.

Guinot B. Scales of Time, 431-440.

Hahn J.W. Interpolation Equation for the Calibration of Infrared Pyrometers, J.W. Hahn, C. Rhee, 27-32.

Hara K. Progress of Electricity Standards in Japan: Amalgamation of Electricity and Mass Standards, 441-446.

Hill K.D. An Apparatus for Realizing the Triple Point of Mercury, 39-43.

Højgaard Jensen H. Organizations for Standardization of Quantities and Units, H. Højgaard Jensen, A.J. Thor, 503-509.

Hu J. Russian-Finnish Comparison of the Frequencies of Iodine-stabilized He-Ne Lasers at 633 nm, L.F. Vitushkin, Yu.G. Zakharenko, N.A. Melnikov, Jianpei Hu, E. Ikonen, K. Riski, 33-34.

——. Frequency Shift of Iodine Absorption Components Caused by a Small Amount of $^{127}I^{129}I$, J. Hu, E. Ikonen, K. Riski, 389-394.

Hudson R.P. Revised Values for $(t_{90} - t_{68})$ from 630 °C to 1064 °C, R.L. Rusby, R.P. Hudson, M. Durieux, 149-153.

Hurst R.B. A Method to Measure Newton's Gravitational Constant, M.P. Fitzgerald, T.R. Armstrong, R.B. Hurst, A.C. Corney, 301-310.

Ikonen E. Russian-Finnish Comparison of the Frequencies of Iodine-stabilized He-Ne Lasers at 633 nm, L.F. Vitushkin, Yu.G. Zakharenko, N.A. Melnikov, Jianpei Hu, E. Ikonen, K. Riski, 33-34.

——. Frequency Shift of Iodine Absorption Components Caused by a Small Amount of $^{127}I^{129}I$, J. Hu, E. Ikonen, K. Riski, 389-394.

Imai H. Transfer and Development of Metrology Standards by Japan and Asian Countries, 529-535.

Kääriäinen J. Comment on "Refinement of the Metrological Chain for Calibration of Long-distance Measurement Systems" by A.N. Golubev, A.M. Chekhovsky and S.N. Zakroischikov, J. Kääriäinen, R. Konttinen, 401.

Kaliteyevsky A.K. Scientific, Engineering and Metrological Problems in Producing Pure ^{28}Si and Growing Single Crystals, Yu.V. Tarbeyev, A.K. Kaliteyevsky, V.I. Sergeyev, R.D. Smirnov, O.N. Godisov, 269-273.

Kang K.H. Immersion Characteristics and Reproducibility of the Gold/Palladium Thermocouple, Y.-G. Kim, K.S. Gam, K.H. Kang, 145-147.

Karpov O.V. Transportable Zener-diode Voltage Standard, O.V. Karpov, V.M. Shulga, F.R. Shakirzyanova, A.E. Sarandi, 141-143.

Khavinson V.M. Measuring the Vertical Displacements of the Centre of Gravity of a Levitated Superconducting Body, V.M. Khavinson, E.T. Frantsuz, 1-7.

Kim Y.-G. Immersion Characteristics and Reproducibility of the Gold/Palladium Thermocouple, Y.-G. Kim, K.S. Gam, K.H. Kang, 145-147.

Konttinen R. Comment on "Refinement of the Metrological Chain for Calibration of Long-distance Measurement Systems" by A.N. Golubev, A.M. Chekhovsky and S.N. Zakroischikov, J. Kääriäinen, R. Konttinen, 401.

Kose V. Dissemination of Units in Europe: Traceability and its Assurance in a National and Regional Context, 457-466.

Labate D. A Comparison of Fractal Dimension and Spectrum Coefficient Characterization of $1/f^{\alpha}$ Noise, D. Labate, F. Canavero, A. De Marchi, 51-53.

Leistner A.J. Fabrication and Sphericity Measurements of Single-crystal Silicon Spheres, A.J. Leistner, W.J. Giardini, 231-243.

Lo-Hive J.-P. A Comparison of One Volt Josephson Junction Array Voltage Standards Driven by a Common Microwave Source, D. Reymann, J.-P. Lo-Hive, G. Genevès, 35-37.

——. Josephson Voltage Standard International Comparison, M. López, A. Camón, J.M. Balmisa, M. Coterón, P. de la Court, L. Erard, J.-P. Lo-Hive, G. Genevès, L. Grimm, L. Lorenzo, R. Pöpel, C. Rillo, 395-397.

López M. Josephson Voltage Standard International Comparison, M. López, A. Camón, J.M. Balmisa, M. Coterón, P. de la Court, L. Erard, J.-P. Lo-Hive, G. Genevès, L. Grimm, L. Lorenzo, R. Pöpel, C. Rillo, 395-397.

Lorenzo L. Josephson Voltage Standard International Comparison, M. López, A. Camón, J.M. Balmisa, M. Coterón, P. de la Court, L. Erard, J.-P. Lo-Hive, G. Genevès, L. Grimm, L. Lorenzo, R. Pöpel, C. Rillo, 395-397.

Maas H. Correlation Between the Resistance Ratios of Platinum Resistance Thermometers at the Melting Point of Gallium and the Triple Point of Mercury, Y.P. Singh, H. Maas, F. Edler, Z.H. Zaidi, 49-50.

Mana G. The Lattice Parameter of Silicon: A Survey, P. Becker, G. Mana, 203-209.

——. Volume of Quasi-spherical Solid Density Standards, 289-300.

McGlashan M.L. Amount of Substance and the mole, 447-455.

Melnikov N.A. Russian-Finnish Comparison of the Frequencies of Iodine-stabilized He-Ne Lasers at 633 nm, L.F. Vitushkin, Yu.G. Zakharenko, N.A. Melnikov, Jianpei Hu, E. Ikonen, K. Riski, 33-34.

Mills I.M. Unity as a Unit, 537-541.

Morris E.C. Measurement of Absolute Water Density, 1 °C to 40 °C, J.B. Patterson, E.C. Morris, 277-288.

Nugent K.A. Reply to Comment by E. Wolf on "Radiometric Measurements and Correlation-induced Spectral Changes" by K.A. Nugent and J.L. Gardner, 313-314.

Nußhardt M. X-ray and Neutron Interferometry and the Measurement of Fundamental Constants, U. Bonse, H. Uebbing, M. Bartscher, M. Nußhardt, 195-201.

Pajot B. Spectroscopic Measurements of Residual Impurities in Silicon and Application to the Measurement of Local Lattice Distortion, 263-267.

Patterson J.B. Measurement of Absolute Water Density, 1 °C to 40 °C, J.B. Patterson, E.C. Morris, 277-288.

Petley B.W. A Brief History of the Electrical Units to 1964, 481-494.

——. Electrical Units – the Last Thirty Years, 495-502.

Peuto A. Density of Silicon Crystals, M. Tanaka, A. Peuto, 219-230.

Pinot P. Stability of Mass Standards Made of XSH Alacrite: Gravimetric Study of the Influence of Cleaning, 357-365.

Pöpel R. Josephson Voltage Standard International Comparison, M. López, A. Camón, J.M. Balmisa, M. Coterón, P. de la Court, L. Erard, J.-P. Lo-Hive, G. Genevès, L. Grimm, L. Lorenzo, R. Pöpel, C. Rillo, 395-397.

Qiu J.H. Stability of Reference Masses II: The Effect of Environment and Cleaning Methods on the Surfaces of Stainless Steel and Allied Materials, M.P. Seah, J.H. Qiu, P.J. Cumpson, J.E. Castle, 93-108.

Quinn T.J. News from the BIPM, 55-62.

——. Results of Recent International Comparisons of Measurement Standards Carried Out by the BIPM, 63-68.

——. Traceability of Mass Standards among Thirty-nine Member States of the Convention du Mètre, 337.

——. Base Units of the Système International d'Unités, their Accuracy, Dissemination and International Traceability, 515-527.

Reymann D. A Comparison of One Volt Josephson Junction Array Voltage Standards Driven by a Common Microwave Source, D. Reymann, J.-P. Lo-Hive, G. Genevès, 35-37.

——. Comparisons of the Josephson Voltage Standard of the BIPM with those of the OFM and the NMi, D. Reymann, U. Feller, P. de la Court, T.J. Witt, 45-48.

Rhee C. Interpolation Equation for the Calibration of Infrared Pyrometers, J.W. Hahn, C. Rhee, 27-32.

Riehle F. International Comparison of Two Iodine-stabilized He-Ne Lasers at $\lambda = 543$ nm, H.R. Simonsen, U. Brand, F. Riehle, 341-347.

Rillo C. Josephson Voltage Standard International Comparison, M. López, A. Camón, J.M. Balmisa, M. Coterón, P. de la Court, L. Erard, J.-P. Lo-Hive, G. Genevès, L. Grimm, L. Lorenzo, R. Pöpel, C. Rillo, 395-397.

Riski K. Russian-Finnish Comparison of the Frequencies of Iodine-stabilized He-Ne Lasers at 633 nm, L.F. Vitushkin, Yu.G. Zakharenko, N.A. Melnikov, Jianpei Hu, E. Ikonen, K. Riski, 33-34.

——. Frequency Shift of Iodine Absorption Components Caused by a Small Amount of $^{127}I^{129}I$, J. Hu, E. Ikonen, K. Riski, 389-394.

Rusby R.L. Revised Values for $(t_{90} - t_{68})$ from 630 °C to 1064 °C, R.L. Rusby, R.P. Hudson, M. Durieux, 149-153.

Sarandi A.E. Transportable Zener-diode Voltage Standard, G.V. Karpov, V.M. Shulga, F.R. Shakirzyanova, A.E. Sarandi, 141-143.

Schwartz R. Precision Determination of Adsorption Layers on Stainless Steel Mass Standards by Mass Comparison and Ellipsometry: Part I: Adsorption Isotherms in Air, 117-128; Part II: Sorption Phenomena in Vacuum, 129-136.

Seah M.P. Stability of Reference Masses I: Evidence for Possible Variations in the Mass of Reference Kilograms Arising from Mercury Contamination, P.J. Cumpson, M.P. Seah, 21-26.

——. Stability of Reference Masses II: The Effect of Environment and Cleaning Methods on the Surfaces of Stainless Steel and Allied Materials, M.P. Seah, J.H. Qiu, P.J. Cumpson, J.E. Castle, 93-108.

——. Stability of Reference Masses III: Mechanism and Long-term Effects of Mercury Contamination on Platinum-Iridium Mass Standards, P.J. Cumpson, M.P. Seah, 375-388.

Sergeyev V.I. Scientific, Engineering and Metrological Problems in Producing Pure ^{28}Si and Growing Single Crystals, Yu.V. Tarbeyev, A.K. Kaliteyevsky, V.I. Sergeyev, R.D. Smirnov, O.N. Godisov, 269-273.

Seyfried P. The Role of NA in the SI: An Atomic Path to the Kilogram, P. Seyfried, P. Becker, 167-172.

Shakirzyanova F.R. Transportable Zener-diode Voltage Standard, O.V. Karpov, V.M. Shulga, F.R. Shakirzyanova, A.E. Sarandi, 141-143.

Shulga V.M. Transportable Zener-diode Voltage Standard, O.V. Karpov, V.M. Shulga, F.R. Shakirzyanova, A.E. Sarandi, 141-143.

Simonsen H.R. International Comparison of Two Iodine-stabilized He-Ne Lasers at l = 543 nm, H.R. Simonsen, U. Brand, F. Riehle, 341-347.

Singh Y.P. Correlation Between the Resistance Ratios of Platinum Resistance Thermometers at the Melting Point of Gallium and the Triple Point of Mercury, Y.P. Singh, H. Maas, F. Edler, Z.H. Zaidi, 49-50.

Smirnov R.D. Scientific, Engineering and Metrological Problems in Producing Pure ^{28}Si and Growing Single Crystals, Yu.V. Tarbeyev, A.K. Kaliteyevsky, V.I. Sergeyev, R.D. Smirnov, O.N. Godisov, 269-273.

Steur P.P.M. ITS-90 Realization in Fourteen National Standards Laboratories: Results of a CCT Inquiry, L. Crovini, P.P.M. Steur, 109-115.

Tanaka M. Density of Silicon Crystals, M. Tanaka, A. Peuto, 219-230.

Tarbeyev Yu.V. Scientific, Engineering and Metrological Problems in Producing Pure ^{28}Si and Growing Single Crystals, Yu.V. Tarbeyev, A.K. Kaliteyevsky, V.I. Sergeyev, R.D. Smirnov, O.N. Godisov, 269-273.

Taylor B.N. Determining the Avogadro Constant from Electrical Measurements, 181-194.

Thomas C. Technical Directives for Standardization of GPS Time Receiver Software, D.W. Allan, C. Thomas, 69-79.

Thor A.J. Organizations for Standardization of Quantities and Units, H. Højgaard Jensen, A.J. Thor, 503-509.

Uebbing H. X-ray and Neutron Interferometry and the Measurement of Fundamental Constants, U. Bonse, H. Uebbing, M. Bartscher, M. Nusshardt, 195-201.

Valkiers S. Molar Mass Determination for N_A (Avogadro) Projects: Present Status and Potential for the Future, P. De Bièvre, S. Valkiers, 245-249.

Vittone E. The Takagi Equations in Evaluating the Contributions of Some Systematic Errors in Scanning LLL X-ray Interferometers, E. Vittone, G. Zosi, 211-218.

Vitushkin L.F. Russian-Finnish Comparison of the Frequencies of Iodine-stabilized He-Ne Lasers at 633 nm, L.F. Vitushkin, Yu.G. Zakharenko, N.A. Melnikov, Jianpei Hu, E. Ikonen, K. Riski, 33-34.

Weiss M.A. Sifting through Nine Years of NIST Clock Data with TA2, M.A. Weiss, T.P. Weissert, 9-19.

Weissert T.P. Sifting through Nine Years of NIST Clock Data with TA2, M.A. Weiss, T.P. Weissert, 9-19.

Witt T.J. Comparisons of the Josephson Voltage Standard of the BIPM with those of the OFM and the NMi, D. Reymann, U. Feller, P. de la Court, T.J. Witt, 45-48.

Wolf E. Comment on "Radiometric Measurements and Correlation-induced Spectral Changes" by K.A. Nugent and J.L. Gardner, 311-313. Reply from K.A. Nugent, J.L. Gardner, 313-314.

Zaidi Z.H. Correlation Between the Resistance Ratios of Platinum Resistance Thermometers at the Melting Point of Gallium and the Triple Point of Mercury, Y.P. Singh, H. Maas, F. Edler, Z.H. Zaidi, 49-50.

Zakharenko Yu.G. Russian-Finnish Comparison of the Frequencies of Iodine-stabilized He-Ne Lasers at 633 nm, L.F. Vitushkin, Yu.G. Zakharenko, N.A. Melnikov, Jianpei Hu, E. Ikonen, K. Riski, 33-34.

Zakroischikov S.N. Refinement of the Metrological Chain for Calibration of Long-distance Measurement Systems, A.N. Golubev, A.M. Chekhovsky, S.N. Zakroischikov, 137-139.

Zhang Y. The Effects of Annealing on the Resistance of High-temperature PRTs at the Triple Point of Water after High-temperature Use, J. Ancsin, Y. Zhang, 85-91.

Zosi G. The Takagi Equations in Evaluating the Contributions of Some Systematic Errors in Scanning LLL X-ray Interferometers, E. Vittone, G. Zosi, 211-218.

Zulehner W. The Growth of Highly Pure Silicon Crystals, 255-261.